### Report to Maryland State Board of Education Maryland High School Assessment Summary of January 2000 Field Test Results March 29, 2000

The Maryland High School Assessment (MHSA) is designed to evaluate the academic proficiency of Maryland High School students in terms of their readiness for high school graduation. Five content areas will be assessed initially: English 1, Algebra, Geometry, Government, and Biology. In 2002, the MHSA will be fully operational. In 2001, the MHSA will be given under operational conditions, but the scores will not count toward the students' high school graduation standing. In 2000, a field test of potential operational items and test administration procedures occurs in January and May.

This report describes preliminary results of the January 2000 field test. A number of psychometrically complex item response theory (IRT) analyses currently are being conducted and are not presented in this report. Although unlikely, if these additional analyses uncover any problems not presented in this report, the Board will be notified in a timely fashion. In addition, the May 2000 field test will involve more items, versions, and students. Data from January 2000 and May 2000 will be combined to produce a final field test report.

In the January 2000 field test, the quality and appropriateness of the items for Maryland high school students, and test administration procedures, were evaluated. Field test versions, which were constructed using the specifications for operational forms, were administered to large numbers of Maryland high school students using test administration procedures similar to those that will be employed with the operational test. Test items were written by Maryland teachers, and item editing services generally were provided by CTB/McGraw-Hill. Items were then placed into field test versions so that the content, number, and types of items mirrored what the operational test forms are expected to look like. Items that survive the scrutiny of the field test analyses will be included in the pool of items from which the operational test forms will be constructed.

Test administration procedures were evaluated in terms of questionnaires administered to the Local Accountability Coordinator (LAC), the School Test Coordinator, and the Field Test Examiner. In addition, there was a student questionnaire given in each content area.

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### Field Test Sample

All students in the relevant courses in four-period semester high schools were eligible for the January field test as these students completed their courses in January. Content areas were assigned to schools essentially at random; some manual assignments were necessary to accommodate the requests of certain schools and to maintain appropriate representativeness of the samples. A total of approximately 1500 students were needed to complete each form. As such, an overage of approximately 1950 students were recruited to take each field test form, to help reach recruitment goals and allow for some student attrition (e.g., absenteeism, lack of motivation to complete test, etc.). Most schools administered field tests in two or three subject areas; some administered only one subject. A few eligible schools declined to participate fully in the January field test and will be included in the May 2000 field test. Alternative schools and middle schools were not invited and therefore did not participate. It was decided for expediency to include these schools in the May 2000 field test sample when all of the high schools in the state will be available for participation. The schools that participated in this January sample and the content areas administered to them are listed in Appendix I.

Schools were selected to be representative of the student population in terms of several important background variables. The variables include gender, ethnicity, plans to attend college, free/reduced-lunch program, limited English fluency, and students from Baltimore City schools.

(Proportion of students from Baltimore City was thought to be an important variable because of the size of the district and the background characteristics of many of its students.) Table 1 shows the distribution of student background characteristics for each content area sample based on 1998-99 school statistics. These proportions of students are representative of the population of high school students in 4-period schools throughout the state.

Table 1. Proportion of Students in Each Sample

	Algebra	Biology	English	Geometry	Government
Female	52	49	50	51	50
Male	47	50	49	47	47
African American	43	38	42	36	37
Asian	2	3	2	2	2
Hispanic	2	2	1	2	2
White	49	53	52	55	54
Other	3	3	3	4	4
Baltimore City	16	26	25	19	28

### Field Test Versions

The numbers of January field test versions were as follows: English, Algebra, and Geometry (4); Biology (3); Government (2). These numbers of versions were based on the number of items that were written and survived editorial reviews. Item types include selected response (SR), student produced response (SPR; also called "gridded-response"), brief constructed response (BCR), and extended constructed response (ECR). The numbers of item types in each version of each test are indicated in Table 2:

Table 2. Number of Items in Each Field Test Version

)	Anchors (SR items)	SR	SPR	BCR	ECR
Algebra	29	37	7	6	4
Biology	30	48	-	5	2
English	30	50	-	2	1
Geometry	30	40	10	6	3
Government	28	38	-	9	1

Anchor items were included in each form to help ensure the successful placement of item statistics on the same scale. A total of 30 additional SR anchor items were included in Biology, English, and Geometry; for Government, there were 28 anchor items, and for Algebra there were 29 anchor items. Within each content area, the same set of anchor items appeared in each version. Items selected as anchors represented the content of entire test and could be considered a "mini-test". Anchor items were distributed throughout the test.

### Field Test Administration

The field test versions of the content areas were spiraled within classrooms and schools to try to ensure that randomly equivalent groups of students completed each test version. This was achieved by stacking the test versions in alternating fashion so that they would be distributed at equal rates within each classroom across the state. For example, English versions were administered 1-2-3-4--1-2-3-4 and so on to individual students within each classroom. In this way, approximately the same number of students from throughout the state would complete each version. Also, randomly equivalent groups of students in terms of background and achievement

levels would take each version. This equivalence of samples taking each form will help ensure that the items will be accurately placed on the score scale.

Total test session time was three hours. A total of 2.5 hours was allocated to answer items. The remaining time was for the distribution and collection of test materials, test directions, and a break.

To assist in standardized test administration procedures, manuals outlining the administration procedures were supplied to the LAC, the School Test Coordinator (STC), and the Test Administrators (TA). In addition, each LAC participated in a two-hour regional workshop that reviewed the information contained in the manuals. LAC's were responsible for reviewing this information with the STC's and the TA's. Following the completion of the field test, questionnaires were administered to these staff members to obtain information regarding specific aspects of the test delivery, distribution, administration, monitoring, and return of the field test materials.

### Field Test Results

Because field test versions for each content area were spiraled within each classroom, it was expected that approximately the same number of students would take each form within each content area. A total of approximately 1500 students per form was desired to try to ensure sufficient precision in the results. Across content areas, the numbers of students taking each of the versions were as follows: Algebra (842 - 933); Biology (1401 - 1524); English (1313 – 1457); Geometry (1088 - 1366); and Government (1397 - 1398). The numbers of students that answered each item generally are less than these numbers because students could omit items.

The brief and extended constructed-response items were scored by raters using rubrics. These rubrics were developed to differentiate important and measurable differences in item performance by Maryland students. The numbers of points possible by item type were as follows:

	<u>BCR</u>	<u>ECR</u>	<u>Graph</u>
Algebra	3	4	
Biology	4	4	3
English	4	6	
Geometry	3	4	
Government	4	4	

Analyses were conducted to evaluate the appropriateness of the test items for Maryland high school students. These analyses included assessment of the difficulty levels of the items, how well the items correlate with the total test score, differential item functioning, and questionnaire results. Specific information about each of these analyses is described below<sup>1</sup>.

<u>Item difficulty.</u> Items should be appropriately difficult to be included in a final operational form. Items with extreme difficulty levels (either very easy and very hard) will receive special scrutiny to help determine their usefulness in the MHSA. Item difficulty statistics were computed excluding omitted responses. Indicators of item difficulty are the mean proportion correct statistic for the multiple choice items, and the mean percent of the total possible score for the constructed-response items. The distributions of item difficulties for selected-response and constructed-response items are presented in Tables 3-6.

For English, the SR items covered a wide range of item difficulty. About half of the SR items were in the .5 - .7 difficulty range. All eight of the BCR items (2 per version) and all four of the ECR items were in the .5 - .7 range.

<sup>&</sup>lt;sup>1</sup> As mentioned earlier, item response theory (IRT) analyses are currently being conducted and are not included in this report.

Table 3. Distribution of Mean Percent Correct (p-values) for Selected-Response Items

Mean	Algebra	Biology	English	Geometry	Government
Percent Correct	(% of items)				
>.80	3	2	4	1	3
.7180	5	8	14	3	8
.6170	10	13	14	4	23
.5160	15	14	27	8	25
.4150	27	26	21	23	16
.3040	23	25	13	38	15
<.30	17	12	7	23	10
Total Number of Items	177	174	230	190	104

Table 4. Distribution of Mean Percent Correct (p-values) for Student-Produced Response Items

Mean	Algebra	Geometry
Percent Correct	(% of items)	(% of items)
>.60	0	0
.5160	. 11	0
.4150	14	0
.3140	7	2
.2130	29	8
.1120	11	23
.0110	28	67
Total Number of Items	28	40

Table 5. Distribution of Mean Percent of Total Possible Number of Points for Brief Constructed-Response Items

Mean of Percent	Algebra	Biology	English	Geometry	Government
Of Total Possible Points	(# of items)				
>.80	0	0	0	0	0
.7180	11	1*	0	0	0
.6170	1	0	5	2	0
.5160	5	2	3	4	1
.4150	10	1	0	12	15
.3040	7	12	0	6	2
<.30	0	0	0	0	0
Number of Points					
Possible per Item	3	4*	4	3	4
Total Number of Items	24	16	8	24	18

<sup>\*</sup>One Biology item (mean = .78) was actually a "graph" item worth 3 points.

Table 6. Distribution of Mean Percent of Total Possible Number of Points for Extended Constructed-Response Items

Mean of Percent Of Total Possible Points	Algebra (# of items)	Biology (# of items)	English (# of items)	Geometry (# of items)	Government (# of items)
>.80	0	0	0	0	0
.7180	0	0	0	0	0
.6170	0	0	2	1	0
.5160	2	0	2	1	1
.4150	6	3	0	5	1
.3040	8	2	0	4	0
<.30		0	0	1	0
Number of Points					
Possible per Item	4	4	6	4	4
Total Number of Items	16	5	4	12	2

Item-total correlation. The degree to which an item assesses the construct being measured is an important factor in evaluating the usefulness of an item. One method of evaluating this is reflected in the correlation between scores on the item and the total test scores minus the score on the studied item. In this analysis, the studied item was removed from the total score so as to not artificially inflate the correlation; this could be particularly problematic for the extended constructed response items that are worth several points. The distributions of item-total correlations for selected-response and constructed-response items are presented in Tables 7-10. Tables 7 and 8 show percents of items, and Tables 9 and 10 show numbers of items.

It is generally desirable from a psychometric standpoint that most items have item-total correlations above .15. It can be seen below for English that about 91% of SR items have item-total correlations of at least .15; 17% of SR items had item-total correlations greater than .44. The SR items with item-total correlations less than .15 will be carefully scrutinized to determine the probable cause of the low correlation and whether the item is appropriate for the test. Seven BCR items and all four ECR items had item-total correlations between .55 - .65.

Table 7. Percent Distributions of Item-Total Correlations for Selected-Response Items

Correlation	Algebra (% of items)	Biology (% of items)	English (% of items)	Geometry (% of items)	Government (% of items)
>.54	0	0	1 1	0	0
.45 - 54	4	16	16	6	17
.3544	27	35	35	24	31
.2534	29	26	27	37	23
.1524	20	14	12	19	14
<.15	20	9	9	14	15
N of Items	177	174	230	190	104

Table 8. Percent Distributions of Item-Total Correlations for Student Produced Response Items

Correlation	Algebra (% of items)	Geometry (% of items)
>.54	0	2
.45 - 54	14	28
.3544	36	38
.2534	29	22
.1524	7	8
<.15	14	2
N of Items	28	40

Table 9. Distributions of Item-Total Correlations for Brief Constructed-Response Items

Correlation	Algebra (# of items)	Biology (# of items)	English (# of items)	Geometry (# of items)	Government (# of items)
>.64	0	0	1	0	0
.5564	0	5	7	2	15
.4554	3	7	0	6	3
.3544	7	3	0	11	0
.2534	8	1	0	5	0
.1524	5	0	0	0	0
<.15	1	0	0	0	0
N of Items	24	16	8	24	18

Table 10. Distributions of Item-Total Correlations for Extended Constructed-Response Items

Correlation	Algebra (# of items)	Biology (# of items)	English (# of items)	Geometry (# of items)	Government (# of items)
.5565	1	0	4	5	2
.4554	2	5	0	4	0
.3544	9	0	0	1	0
.2534	1	0	0	2	0
.1524	3	0	0	0	0
<.15	0	0	0	0	0
N of Items	16	5	4	12	2

<u>Differential Item Functioning.</u> Differential item functioning (DIF) refers to whether the two groups perform differently on an item after controlling for total test scores for the two groups. An item flagged for DIF is more difficult for a particular subgroup of students than would be expected based on their total test scores. A statistical index called the Mantel statistic is used to flag items that show DIF. Comparisons were made between female and male students, and between African American and White students (the only groups with sufficient sample sizes).

Table 11 shows the numbers of items flagged statistically for potential DIF. Very few SR items were flagged. (Note: the DIF results for the BCR and ECR items will be forthcoming.) Flagged items do not necessarily indicate that the item is biased against a particular group. For example, the differences could reflect different curricular experiences for two groups. The determination of the plausible cause of the DIF flag is made by a special committee that consists of content experts with a variety of different backgrounds. The DIF committee will decide whether these items should be available for the MHSA item bank to be available for use on operational forms.

Table 11. Number of Items Flagged Statistically for DIF Against the Group

		African American	White	Female	Male	Number of Items
Algebra	SR BCR ECR	4	5	3	1	177
Biology	SR BCR ECR	0	0	1	0	174
English	SR BCR ECR	1	3	1	1	230
Geometry	SR BCR ECR	0	2	0	0	190
Governme	nt SR BCR ECR	0	3	1	0	104

Total raw score distributions and test reliability. A preliminary look at how total scores on the operational test might look can be obtained from the total scores on the field test versions. However, there are several important differences between the field test and an operational test that must be kept in mind:

- The specifications for the field test versions were the same as those that are
   <u>expected</u> for the operational test. However, the specifications for the operational
   tests may end up being different. If so, then the field tests and operational tests may
   be somewhat different.
- The quality of the collection of items on a field test version is not as high as the
  quality of the collection of items on an operational form. This is to be expected given
  that an important purpose of the field test is to identify poorly performing items and to
  exclude them from being eligible for an operational form.
- Student motivational levels to perform their best on the field test is questionable given that field test scores will not be reported.

Given these caveats, it is still informative to examine the total raw score distributions. A total raw score for a student is equal to the sum of the number of selected-response items answered correctly plus the number of score points attained on the constructed-response items. The anchor items were excluded from these analyses because, like the field test items in an operational test, they will not count toward student scores.

Table 12 shows summary statistics for each field test version based on total raw scores (note that the method for computing operational scores has not yet been finalized). In English, on average, students received about 53% of the total possible points (34/64). The standard deviations of each version indicate a fairly wide spread of scores around the mean. This spread of scores is also supported by the percentiles columns that show the corresponding points on the total raw score distributions. For example, for English version 1, 25 percent of students got fewer than 39 percent of the total possible raw score. The middle 90 percent of students got between 23 percent and 78 percent of the total possible number of points. It also can be seen that version 4 appears to have been somewhat easier than the other versions (mean score on version 4 was 37.3). Given that items assigned to versions were new and had no previous statistics, it is

not unexpected that some versions turned out to be easier than others. In addition, note that the mean scores generally are lower than expected due in part to large item omit rates.

Table 12 also shows the reliability estimates and standard errors of measurement (SEM) for the field test versions. The reliability of a test in this context provides an estimate of the degree to which the test would yield dependable and consistent results over repeated administrations. Reliability estimates are affected by a number of factors, including the number and quality of items on the test and the degree to which items measure the same or similar constructs. Reliability coefficients can range from 0 to 1, and a reliability of 0.90 or higher is commonly considered an accepted level. Because the overall quality of items on the field test is not as high as the overall quality of items on the operational test, the reliability of the field test versions might serve as a lower limit of the predicted reliability of operational forms. The standard error of measurement (SEM) indicates the amount of measurement imprecision associated with scores. The SEM is often used to create confidence intervals around students' scores.

For English, the reliability coefficients were very high (about .93-.94). The SEM is correspondingly low (about 3.0). Another related issue is consistency of measurement around standards-based cut scores. This information is not available because the standards have not yet been set.

Table 12. Summary Statistics for Total Raw Score Distributions and Test Reliability

		Total			Per	centiles	s of Per	cent of	Total		
	N	Possible	Mean				ble Rav				
	Students	Score	Score*	SD	5"	25 <sup>th</sup>	50 <sup>th</sup>	75 <sup>th</sup>	95 <sup>th</sup>	Reliability	SEM
Algebra											
Version 1	933	78	23.6	10.0	13	21	28	40	53	0.92	2.8
Version 2	897	78	22.9	9.1	14	21	27	36	51	0.92	2.6
Version 3	877	78	24.5	8.5	15	24	31	38	51	0.91	2.5
Version 4	842	78	26.7	10.9	14	23	32	44	59	0.92	3.0
Mean	887	78	23	10	13	21	28	38	52	0.92	2.7
Biology											
Version 1	1524	76	29.2	12.4	17	25	36	50	68	0.94	3.0
Version 2	1457	76	30.6	12.1	18	28	38	50	70	0.94	3.0
Version 3	1401	75	28.9	12.6	17	25	35	49	72	0.94	3.1
Mean	1461	76	29.6	12.4	18	26	36	50	70	0.94	3.0
English											
Version 1	1457	64	33.3	10.8	23	39	52	66	78	0.93	2.9
Version 2	1403	64	31.5	11.1	22	36	48	63	78	0.93	3.0
Version 3	1364	64	33.9	12.1	23	38	52	69	84	0.94	3.1
Version 4	1313	64	37.3	12.7	27	42	59	75	88	0.94	3.1
Mean	1384	64	34.0	11.7	24	39	53	68	82	0.94	3.0
Geometry											
Version 1	1366	80	21.0	10.8	11	16	23	33	55	0.92	3.0
Version 2	1342	80	21.7	10.3	13	18	24	35	50	0.91	3.1
Version 3	1284	80	22.8	9.9	13	20	26	35	53	0.92	2.8
Version 4	1088	80	23.1	10.0	14	20	26	36	51	0.92	2.7
Mean	1354	80	21.4	10.6	12	17	23	34	53	0.92	3.1
Government											
Version 1	1397	78	35.7	13.1	19	32	45	58	73	0.94	3.1
Version 2	1398	78	33.7	12.9	18	31	44	55	71	0.94	3.2
Mean	1398	78	34.7	13.0	19	31	44	56	72	0.94	3.2

<sup>\*</sup> Mean scores generally are lower than expected due in part to large item omit rates.

Test completion rates. One of the purposes of the field test was to evaluate the adequacy of the time limits for students to complete the test. As the results of these tests will be used for making high stakes decisions, it is important to ensure that the test is not speeded (i.e., all students have ample opportunity to complete the test). The time limits were evaluated, in part, in terms of the number of items answered by students. If the time allotted was insufficient, then a large proportion of students would not complete the test.

An important caveat should be kept in mind in evaluating these results. Student motivational levels to complete the field test are not known. Therefore, a student may not have completed the field test because of low motivation, not necessarily because there was insufficient time. Even so, it is informative to examine the numbers of items answered by students.

Table 13 shows the percent of students that completed the test and the mean percent of items answered. Using English as an example, on average 65 percent of students answered all of the items, 83 percent of students answered both BCR items, and 81 percent of students answered the ECR item.

Table 13. Summary of Field Test Completion Rates.

	Percent Who Answered	Percent Who Answered All SR and	Per	rcent	Who	Ansv		The	se Nu	mbers	s of E	BCR		cent V se Nu		rs of I	
	All Items	SPR Items	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
Algebra Version 1 Version 2 Version 3 Version 4 Mean	<1 <1 <1 <1 <1	40 41 42 45 42	33 35 31 14 28	27 25 20 19 23	20 18 17 27 20	12 14 15 19 15	5 7 10 13 8	4 2 5 6 4	1 <1 2 1				19 55 49 14 34	37 25 22 31 29	26 13 17 29 21	14 5 10 17 11	5 2 3 10 5
Biology Version 1 Version 2 Version 3 Mean	12 12 18 14	81 79 81 80	18 28 8 18	17 18 11 15	16 14 13 14	16 13 14 14	17 13 14 15	16 15 18 16	22* 22				47 42 57 49	21 23 43 29	31 35 *		
English Version 1 Version 2 Version 3 Version 4 Mean	68 64 63 67 65	80 80 78 81 80	4 9 5 4 5	12 11 11 13 12	84 80 84 82 83								19 20 20 19 19	81 80 80 81 81			
Geometry Version 1 Version 2 Version 3 Version 4 Mean	<1 <1 <1 <1 <1	26 23 26 30 26	31 29 37 35 33	26 20 23 21 23	20 20 18 21 20	14 13 13 13 13	6 10 7 6 7	1 5 2 3 3	<1 3 1 1				51 52 55 57 54	23 27 26 24 25	19 17 14 15 16	7 3 5 4 5	
Government Version 1 Version 2 Mean	39 24 31	83 86 85	6 7 6	2 3 3	3 4 3	5 4 4	4 6 5	5 8 6	8 11 9	9 15 12	16 17 16	43 27 35	12 22 17	88 78 83			

<sup>\*</sup> Biology Version 3 contained one ECR item and one graphing item classified as a BCR item.

### Student Questionnaire

Results of the student questionnaire are presented in Appendix II. The following numbers of students completed the questionnaires: Algebra — 3,197; English — 4,871; Biology — 4,198; Geometry – 4,619; Government — 2,637, . The percents of students selecting each option are provided adjacent to the options.

### Conclusions and Next Steps

This section will be completed when results from more content areas are available

List summary of results of the January field-test. Consider the following points: Were students motivated on the field test in terms of total scores, completion rates? Is there evidence of ambiguity with regard to test administration practices? How can these be addressed?

Do most items appear to be of sufficient high quality for operational forms in term of difficulty, discrimination, DIF, rater agreement?

Is the time allotment sufficient?

Do test form statistics appear to be acceptable in terms of total score distributions and reliability?

Appendix I
Participant Schools and Number of Students Administered Each Content Area

	School	Algebra	Biology	English	Geometry	Government*
Anne Arundel	Glen Burnie Senior High					267
Anne Arundel	North East High		127		35	
Anne Arundel	Chesapeake			242	149	260
Baltimore County	Woodlawn	121		281	102	
Baltimore County	Catonsville			207		
Baltimore County	Randallstown	106	39		98	
Baltimore County	Hereford		107	128		
Baltimore County	Patapsco	72		141	" '	146
Baltimore County	Dundalk	69	1		43	157
Baltimore County	Lansdowne	62	130		59	
Baltimore County	Chesapeake HS		92	43		80
Caroline	North Caroline					
Caroline	Colonel Richardson					
Carroll	Francis Scott Key	118	119	***	107	
Carroll	Gateway School					
Carroll	Westminster High	114	258		266	
Carroll	North Carroll High	84			192	208
Carroll	South Carroll High		152	148	146	
Cecil	Bohemia Manor	28	71	63		
Cecil	Elkton High		110	132	76	
Cecil	North East High	28		•	108	120
Cecil	Perryville High School	56		93	75	
Dorchester	North Dorchester		97	**	23	
Dorchester	Cambridge S. Dorchester	143		99	56	
Frederick	Frederick High, Fred. Cnty.		223		154	
Frederick	Gov. Thomas Johnson	108		221		
Frederick	Middletown Sr. High	62			144	
Frederick	Urbana High School	55			131	
Frederick	Linganore High			152		162
Frederick	Catoctin High			67	68	
Frederick	Brunswick High		96		79	
Frederick	Walkersville			202	l .	
Garrett	Southern Garrett	82	83		68	
Harford	Joppatowne		123		101	142
Howard	Howard **	64	148	133		
Howard	Mt. Hebron					
Howard	Centennial High					
Howard	Glenelg					
Howard	Atholton					
Howard	River Hill**	129	120			144
Howard	Oakland Mills					
Howard	Hammond					

	School	Algebra	Biology	English	Geometry	Government*
Howard	Long Reach	-	186	199	127	
Howard	Gateway School, Howard County					
Kent	Kent County High School	70		139	100	
Montgomery	Wheaton					
Prince George's	Bladensburg					
Prince George's	Croom Voc.				14	
Prince George's	Surrattsville		139	176		110
Prince George's	Laurel	129	202		205	
Prince George's	Crossland	138	142	261		
Prince George's	Duval	68			82	
Prince George's	Northwestern	241			181	
Prince George's	Parkdale	40			172	
Prince George's	Eleanor Roosevelt			121		146
Queen Anne's	Queen Anne's Co. High	136		96	119	
Queen Anne's	Kent Island High	124			163	
St. Mary's	Great Mills	109			113	
Somerset	Washington High	30	77		39	
Somerset	Crisfield High	26			19	36
Talbot	Easton High	1	110	111	153	
Talbot	St. Michaels High	50		32	42	
Washington	Williamsport	61	151	136		
Washington	South Hagerstown High	48	104	152		
Washington	North Hagerstown High	44		179	131	
Wicomico	Pocomoke High	35			69	
Wicomico	Snow Hill High		43		10	44
Wicomico	Stephen Decatur*	142		191		
	School for the deaf		8	24		
Baltimore City	Lake Clifton - Eastern	115			78	
Baltimore City	Southern	1		18	95	120
Baltimore City	Edmondson Westside			264		101
Baltimore City	Northwestern High		84		117	110
Baltimore City	Northern High School		,	142	97	145
Baltimore City	Patterson High		236		134	
Baltimore City	Forest Park		98		102	55
Baltimore City	Mergenthaler					
Baltimore City	Walbrook	105	243	257		
Baltimore City	Southwestern		148	135	138	
Baltimore City	Paul Laurence Dunbar			114	107	
Baltimore City	Frederick-Douglass	16		285	36	
Baltimore City	Carver Voc. Tech.	143	316		57	
Baltimore City	Fairmont-Harford					
Baltimore City	Laurence G. Paquin					
Baltimore City	City College High	178		153		140

<sup>\*</sup>Note. One unidentifiable school also completed 102 field test forms.

### Appendix II Student Questionnaire

### Maryland High School Assessment January 2000 Field Test Algebra (N = 3,197)

	(INUII	ibers preceding options are percents or students who chose that option.
1)	How m	any of the test questions covered material from your mathematics course?
	7 30 53 10	A) none or very few B) some but not many C) most of them D) all of them
2)	Were ti	ne directions clear and easy to understand?
	11 26 50 13	A) not at all B) only partially clear C) fairly clear D) perfectly clear
3)	Were t	ne test questions clear and easy to understand?
	11 29 52 8	A) not at al B) only partially clear C) fairly clear D) perfectly clear
4)	Were t	he real-world applications of the problems easy to understand?
	13 36 43 8	A) none or very few B) some but not many C) most of them D) all of them
5)	In your in the t	mathematics course, do you have experiences with real-world problems like those est?
	13 28 44 15	A) not at all B) only a little C) somewhat D) a lot
6)	Which	types of questions do you think you did best on?
	84 8 6	A) multiple choice     B) Response Grids     C) Brief Constructed Response (BCR)     D) Extended Constructed Response (ECR)

40 A) not at all 28 B) only a little 26 C) somewhat 6 D) a lot 8) Do you use the HSA Mathematics Rubrics in your mathematics course? 56 A) not at all 35 B) sometimes 9 C) often 9) On average, how long did it take you to answer the brief constructed response (BCI questions? 29 A) 3 minutes or less 39 B) 4-6 minutes 21 C) 7-9 minutes 11 D) 10 minutes or more 10) On average, how long did it take you to answer the extended constructed response (ECR) questions? 44 A) 10 minutes or less 32 B) 11-20 minutes 17 C) 21-30 minutes 17 C) 21-30 minutes 19 more than 30 minutes 11) How often do you use a graphing calculator in your mathematics class? 11 A) not at all 22 B) only a little 26 C) somewhat 39 D) a lot 12) Which calculator did you use on this test? 80 A) TI-82, TI-83, TI-83+, TI-86, Casio FX-7700, Casio FX-9800, Casio FX-9850 GB+ 5 B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G 4 C) TI-92, TI-92+ 11 D) other	7)		aving the HSA Mathematics Rubrics, for the written questions helpful to you in your answers?
56 A) not at all 35 B) sometimes 9 C) often  9) On average, how long did it take you to answer the brief constructed response (BCI questions?  29 A) 3 minutes or less 39 B) 4-6 minutes 21 C) 7-9 minutes 11 D) 10 minutes or more  10) On average, how long did it take you to answer the extended constructed response (ECR) questions?  44 A) 10 minutes or less 32 B) 11-20 minutes 17 C) 21-30 minutes 17 C) 21-30 minutes 17 D) more than 30 minutes 18 Only a little 26 C) somewhat 39 D) a lot  12) Which calculator did you use on this test?  80 A) TI-82, TI-83, TI-83+, TI-86, Casio FX-7700, Casio FX-9800, Casio FX-9850 GB+ 5 B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G 4 C) TI-92, TI-92+		28 26	B) only a little C) somewhat
35 B) sometimes 9 C) often  9) On average, how long did it take you to answer the brief constructed response (BCI questions?  29 A) 3 minutes or less 39 B) 4-6 minutes 21 C) 7-9 minutes 11 D) 10 minutes or more  10) On average, how long did it take you to answer the extended constructed response (ECR) questions?  44 A) 10 minutes or less 32 B) 11-20 minutes 17 C) 21-30 minutes 17 D) more than 30 minutes 11) How often do you use a graphing calculator in your mathematics class?  13 A) not at all 22 B) only a little 26 C) somewhat 39 D) a lot  12) Which calculator did you use on this test?  80 A) TI-82, TI-83, TI-83+, TI-86, Casio FX-7700, Casio FX-9800, Casio FX-9850 GB+ 5 B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G 4 C) TI-92, TI-92+	8)	Do you	use the HSA Mathematics Rubrics in your mathematics course?
questions?  29 A) 3 minutes or less 39 B) 4-6 minutes 21 C) 7-9 minutes 11 D) 10 minutes or more  10) On average, how long did it take you to answer the extended constructed response (ECR) questions?  44 A) 10 minutes or less 32 B) 11-20 minutes 17 C) 21-30 minutes 17 D) more than 30 minutes 18 A) not at all 29 B) only a little 26 C) somewhat 39 D) a lot  12) Which calculator did you use on this test?  80 A) TI-82, TI-83, TI-83+, TI-86, Casio FX-7700, Casio FX-9800, Casio FX-9850 GB+ 5 B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G 4 C) TI-92, TI-92+		35	B) sometimes
39 B) 4-6 minutes 21 C) 7-9 minutes 11 D) 10 minutes or more  10) On average, how long did it take you to answer the extended constructed response (ECR) questions?  44 A) 10 minutes or less 32 B) 11-20 minutes 17 C) 21-30 minutes 17 D) more than 30 minutes 18 How often do you use a graphing calculator in your mathematics class?  19 A) not at all 20 B) only a little 20 C) somewhat 30 D) a lot  10 Which calculator did you use on this test?  80 A) TI-82, TI-83, TI-83+, TI-86, Casio FX-7700, Casio FX-9800, Casio FX-9850 GB+ 5 B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G 4 C) TI-92+	9)		
(ECR) questions?  44 A) 10 minutes or less 32 B) 11-20 minutes 17 C) 21-30 minutes 7 D) more than 30 minutes  11) How often do you use a graphing calculator in your mathematics class?  13 A) not at all 22 B) only a little 26 C) somewhat 39 D) a lot  12) Which calculator did you use on this test?  80 A) TI-82, TI-83, TI-83+, TI-86, Casio FX-7700, Casio FX-9800, Casio FX-9850 GB+ 5 B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G 4 C) TI-92, TI-92+		39 21	B) 4-6 minutes C) 7-9 minutes
32 B) 11-20 minutes 17 C) 21-30 minutes 7 D) more than 30 minutes 11) How often do you use a graphing calculator in your mathematics class?  13 A) not at all 22 B) only a little 26 C) somewhat 39 D) a lot  12) Which calculator did you use on this test?  80 A) TI-82, TI-83, TI-83+, TI-86, Casio FX-7700, Casio FX-9800, Casio FX-9850 GB+ 5 B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G 4 C) TI-92, TI-92+	10)		
13 A) not at all 22 B) only a little 26 C) somewhat 39 D) a lot  12) Which calculator did you use on this test?  80 A) TI-82, TI-83, TI-83+, TI-86, Casio FX-7700, Casio FX-9800, Casio FX-9850 GB+ 5 B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G 4 C) TI-92, TI-92+		32 17	B) 11-20 minutes C) 21-30 minutes
22 B) only a little 26 C) somewhat 39 D) a lot  12) Which calculator did you use on this test?  80 A) TI-82, TI-83, TI-83+, TI-86, Casio FX-7700, Casio FX-9800, Casio FX-9850 GB+  5 B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G 4 C) TI-92, TI-92+	11)	How of	ten do you use a graphing calculator in your mathematics class?
80 A) TI-82, TI-83, TI-83+, TI-86, Casio FX-7700, Casio FX-9800, Casio FX-9850 GB+  B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G  C) TI-92, TI-92+		22 26	B) only a little C) somewhat
Casio FX-9850 GB+  5 B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G  4 C) TI-92, TI-92+	12)	Which	calculator did you use on this test?
		5 4	Casio FX-9850 GB+ B) TI-89, Casio Algebra FX 2.0, Casio FX-9970G C) TI-92, TI-92+

## Appendix II (continued) Student Questionnaire

### Maryland High School Assessment January 2000 Field Test Biology (N = 4,198)

1)	How many times during this course were you given the opportunity to design investigation?					
	33 41 16 10	A) none B) 1-2 C) 3-4 D) more than 4				
2)	In class question	, how often did you use a rubric to write a response <u>or</u> score a response to a n?				
	38 42 16 4	A) never B) sometimes C) frequently D) always				
3)	In class	, how many times did you construct graphs?				
	19 48 22 11	A) never B) 1-4 C) 5-9 D) 10 or more				
4)	In class the grap	s, how many times did you use the graphic rubric to help you construct <u>or</u> score oh?				
	53 36 8 3	A) never B) 1-4 C) 5-9 D) 10 or more				
5)	Were th	ne directions to the test clear and easy to understand?				
	9 21 49 21	A) not at all B) only partially clear C) fairly clear D) perfectly clear				
6)	Were th	ne questions on the test clear and easy to understand?				
	10 27 50 13	A) not at all B) only partially clear C) fairly clear D) perfectly clear				

7)	How ma	any items were you able to complete in each session?
	9 13 34 44	A) few B) many C) most D) all
8)		rage, how long do you think it took to answer one question requiring a brief written se (BCR)?
	28 44 19 9	A) 3 minutes or less B) 4-6 minutes C) 7-9 minutes D) 10 minutes or more
9)		rage, how long do you think it took to answer one question requiring a longer response (ECR)?
	47 31 15 7	A) 10 minutes or less B) 11-15 minutes C) 16-20 minutes D) more than 20 minutes
10)	Were th	ne graphs, tables, and illustrations easy to understand?
	10 20 46 24	A) none or very few B) some but not many C) most of them D) all of them
11)	How dif	fficult was the technical reading passage used in the assessment?
	9 45 40 6	A) too easy B) just right C) somewhat hard D) very hard
12)	How int	teresting was the technical reading passage to read?
	31 33 31 5	A) not at all B) only a little C) somewhat D) very
13)	In class	s, how often did you read technical reading passages like those in the test?
	20 17 51 12	A) not at all B) only once C) a few times D) many times

- 14) Which questions did you find most difficult?
  - A) selected response questions that were part of a set (two or more items linked 14 to one subject)

    B) selected response questions that were <u>not</u> part of a set
  - 16
  - C) constructed response questions about biology processes and/or experiments 28
  - D) constructed response questions about biology concepts (molecules, cells, organisms, genetics, ecology) 42

# Appendix II (continued) Student Questionnaire

### Maryland High School Assessment January 2000 Field Test English Assessment 1 (N = 4,871)

1)	How m	any of the test questions asked about material covered in your English I course?
	13	A) none or very few
	34	B) some but not many
	38	C) most of them
	15	D) all of them
2)	Were ti	ne directions clear and easy to understand?
	5	A) not at all
	12	B) only partially clear
	53	C) fairly clear
	30	D) perfectly clear
3)	Were tl	ne test questions clear and easy to understand?
	6	A) not at all
	13	B) only partially clear
	57	C) fairly clear
	24	D) perfectly clear
4)	Were ti	ne reading selections easy to understand?
	5	A) none or very few
	14	B) some but not many
	47	C) most of them
	34	D) all of them
5)	Were tl	ne reading selections interesting to read?
	18	A) not at all
	27	B) only a little
	44	C) somewhat
	11	D) a lot
6)	In your	English I course, did you read selections like those in the test?
	20	A) not at all
	30	B) only a little
	39	C) somewhat
	11	D) a lot

7)	vvnicn	types of questions do you think you did best on?						
	63 23 14	A) selected response     B) shorter written questions     C) longer written questions						
8)	Was ha	aving the scoring rubric for the written questions helpful to you in writing your rs?						
	33 26 32 9	A) not at all B) only a little C) somewhat D) a lot						
9)		English I course, were you taught how to write good answers to constructed se questions?						
	7 21 42 30	A) not at all B) once or twice C) several times D) a lot						
10)	On average, how long did it take you to answer one question requiring a brief written response (BCR)?							
	27 41 22 10	A) 3 minutes or less B) 4-6 minutes C) 7-9 minutes D) 10 minutes or more						
11)		erage, how long did it take you to answer one question requiring a longer written se (ECR)?						
	31 42 20 7	A) 10 minutes or less B) 11-20 minutes C) 21-30 minutes D) more than 30 minutes						

# Appendix II (continued) Student Questionnaire

### Maryland High School Assessment January 2000 Field Test Geometry (N = 4,619)

	-	
1)	How ma	any of the test questions covered material from your mathematics course?
	8 29 53 10	A) none or very few B) some but not many C) most of them D) all of them
2)	Were th	ne directions clear and easy to understand?
	9 27 52 12	A) not at all B) only partially clear C) fairly clear D) perfectly clear
3)	Were th	ne test questions clear and easy to understand?
	11 31 51 7	A) not at all B) only partially clear C) fairly clear D) perfectly clear
4)	Were th	ne real-world applications of the problems easy to understand?
	16 41 36 7	A) none or very few B) some but not many C) most of them D) all of them
5)	In your in the te	mathematics course, do you have experiences with real-world problems like those est?
	14 28 45 13	A) not at all B) only a little C) somewhat D) a lot
6)	Which t	ype of questions do you think you did best on?
	88 5 5 2	A) multiple choice     B) Response Grid     C) Brief Constructed Response (BCR)     D) Extended Constructed Response (ECR)

7)	Was having the HSA Mathematics Rubrics for the written response questions helpful to you in writing your answers?						
	27 23	A) not at all B) only a little C) somewhat D) a lot					
8)	Do you	use the HSA Mathematics Rubrics in your mathematics course?					
	37	A) not at all B) sometimes C) often					
9)	age, how long did it take you to answer the brief constructed response (BCR) as?						
	35	A) 3 minutes or less B) 4-6 minutes C) 7-9 minutes D) 10 minutes or more					
10)		age, how long did it take you to answer the extended constructed response uestions?					
	28	A) 7 minutes or less B) 8-12 minutes C) 13-19 minutes D) more than 20 minutes					
10)	35 19 13 On aver (ECR) q 46 28 17	<ul> <li>B) 4-6 minutes</li> <li>C) 7-9 minutes</li> <li>D) 10 minutes or more</li> <li>age, how long did it take you to answer the extended constructed respons juestions?</li> <li>A) 7 minutes or less</li> <li>B) 8-12 minutes</li> <li>C) 13-19 minutes</li> </ul>					

## Appendix II (continued) Student Questionnaire

### Maryland High School Assessment January 2000 Field Test Government (N = 2,637)

1)		How many of the test questions asked about material covered in your Government course?			
	8 28 47 17	A) none or very few B) some but not many C) most of them D) almost all of them			
2)	Were	the directions clear and easy to understand?			
	6 16 52 26	A) not at all B) only partially clear C) fairly clear D) perfectly clear			
3)	Were	the test questions clear and easy to understand?			
	6 22 58 14	A) not at all B) only partially clear C) fairly clear D) perfectly clear			
4)	In you in the	r Government course, did you use cartoons, graphs, excerpts, and charts like those test?			
	10 22 42 26	A) not at all B) only a little C) somewhat D) a lot			
5)	Which	types of questions do you think you did best on?			
	67 25 8	A) selected response     B) shorter written questions     C) longer written question			
6)	Was h	aving the scoring rubric for the written questions helpful to you in writing your ers?			
	44 25 25 6	A) not at all B) only a little C) somewhat D) a lot			

7)	In your Government course, were you taught how to write good answers to constructed response questions?		
	14 32 36 18	A) not at all B) once or twice C) several times D) a lot	
8)	How much do you like to read about social studies topics?		
	29 34 29 8	A) not at all B) only a little C) somewhat D) a lot	
9) On average, how long did it take you to answer one question requiring a response (BCR)?		rage, how long did it take you to answer one question requiring a brief written se (BCR)?	
	31 46 17 6	A) 3 minutes or less B) 4-6 minutes C) 7-9 minutes D) 10 minutes or more	
10)	How los (ECR)?	ng did it take you to answer one question requiring a longer written response	
	54 35 8 3	A) 10 minutes or less B) 11-20 minutes C) 21-30 minutes D) more than 30 minutes	

# Appendix III Administrator Questionnaire

# Maryland High School Assessment January 2000 Field Test All Content Areas<sup>2</sup> (N = 830)

۱.)

	(Numbe	ers preceding options are percents of administrators who chose that option
1)	Overa	II, did you find the test easy to administer?
	64 30 6 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
2)	Overa	II, was there adequate time to administer the test?
	65 15 12 8	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
3)	Was it	easy to prepare to administer the test?
	59 30 10 1	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
4)	Was th	nere adequate time for you to prepare to administer the test?
	65 19 11 5	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
5)	Was it	easy to distribute the test materials to the students?
	69 25 6 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
6)	Was ti	nere adequate time for you to distribute test materials to the students?
	68 20 8 4	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>

 $<sup>^{2}</sup>$  Note: Only Biology Administrators completed questions 16 through 20.

7)	Was it easy for the students to understand the directions of the test?		
8)	A) Yes, very easy.  B) Yes, but it could have been made easier.  C) No, it was difficult.  D) It was all but impossible.  Was there adequate time for you to communicate the test directions to the student	s?	
	A) Yes, the time was ample. B) Yes, but it was almost too short. C) No, but the time was almost enough. D) Not at all; I needed more time.		
9)	Was it easy to monitor the students during the test?		
	<ul> <li>A) Yes, very easy.</li> <li>B) Yes, but it could have been made easier.</li> <li>C) No, it was difficult.</li> <li>D) It was all but impossible.</li> </ul>		
10)	Were you assisted by a proctor to monitor the students during the test?		
	62 A) Yes 38 B) No		
11)	Was it easy to administer the break between sessions of the test?		
	<ul> <li>A) Yes, very easy.</li> <li>B) Yes, but it could have been made easier.</li> <li>C) No, it was difficult.</li> <li>D) It was all but impossible.</li> </ul>		
12)	Was the length of time for the break between sessions adequate?		
	<ul> <li>A) Yes, the time was ample.</li> <li>B) Yes, but it was almost too short.</li> <li>C) No, but the time was almost enough.</li> <li>D) Not at all; I needed more time.</li> </ul>		
13)	Was it easy to prepare, collect, and organize the materials after the test?		
	<ul> <li>A) Yes, very easy.</li> <li>B) Yes, but it could have been made easier.</li> <li>C) No, it was difficult.</li> <li>D) It was all but impossible.</li> </ul>		
14)	Was there adequate time for you to collect, organize, and return the materials to the after the test?	ne STC	
	57 A) Yes, the time was ample. 20 B) Yes, but it was almost too short. 12 C) No, but the time was almost enough. 11 D) Not at all; I needed more time.		

- 15) How many students asked questions to clarify what they were to do?

  - A) Almost none of them.B) A very few of them.C) Many, if not most of them.D) Almost all of them.

### Maryland High School Assessment January 2000 Field Test Algebra (N = 122)

	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	- Francisco - Fran
1)	Overall	, did you find the test easy to administer?
	62 31 6 1	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
2)	Overall	, was there adequate time to administer the test?
	59 15 14 12	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
3)	Was it	easy to prepare to administer the test?
	59 26 13 2	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
4)	Was there adequate time for you to prepare to administer the test?	
	70 19 8 3	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
5)	Was it	easy to distribute the test materials to the students?
	64 25 11 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
6)	Was th	ere adequate time for you to distribute test materials to the students?
	62 23 12 3	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>

7)	Was it easy for the students to understand the directions of the test?	
	44 A) Yes, very easy.	
	38 B) Yes, but it could have been made easier.	
	17 C) No, it was difficult.	
	1 D) It was all but impossible.	
8)	Was there adequate time for you to communicate the test directions to the students?	
	61 A) Yes, the time was ample.	
	27 B) Yes, but it was almost too short.	
	8 C) No, but the time was almost enough.	
	4 D) Not at all; I needed more time.	
9)	Was it easy to monitor the students during the test?	
	82 A) Yes, very easy.	
	12 B) Yes, but it could have been made easier.	
	6 C) No, it was difficult.	
	0 D) It was all but impossible.	
10)	Were you assisted by a proctor to monitor the students during the test?	
	68 A) Yes	
	32 B) No	
11)	Was it easy to administer the break between sessions of the test?	
	73 A) Yes, very easy.	
	20 B) Yes, but it could have been made easier.	
	7 C) No, it was difficult.	
	0 D) It was all but impossible.	
12)	Was the length of time for the break between sessions adequate?	
	77 A) Yes, the time was ample.	
	12 B) Yes, but it was almost too short.	
	9 C) No, but the time was almost enough.	
	D) Not at all; I needed more time.	
13)	Was it easy to prepare, collect, and organize the materials after the test?	
	57 A) Yes, very easy.	
	30 B) Yes, but it could have been made easier.	
	13 C) No, it was difficult.	
	0 D) It was all but impossible.	
14)	Was there adequate time for you to collect, organize, and return the materials to the STC after the test?	
	64 A) Yes, the time was ample.	
	16 B) Yes, but it was almost too short.	
	11 C) No, but the time was almost enough.	
	9 D) Not at all; I needed more time.	
	- ,, · · · · · · · · · · · · · · ·	

- How many students asked questions to clarify what they were to do? 15)
  - 37
  - 57
  - A) Almost none of them.B) A very few of them.C) Many, if not most of them.D) Almost all of them.

### Maryland High School Assessment January 2000 Field Test Biology (N = 158)

Overall,	did you find the test easy to administer?
67 29 4 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
Overall,	was there adequate time to administer the test?
78 15 6 1	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
Was it e	easy to prepare to administer the test?
63 27 10 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
Was the	ere adequate time for you to prepare to administer the test?
71 15 10 4	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
Was it e	easy to distribute the test materials to the students?
73 22 5 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
Was the	ere adequate time for you to distribute test materials to the students?
77 17 5 1	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
	67 29 4 0 Overall, 78 15 6 1 Was it 6 71 10 0 Was the 73 22 5 0 Was the 77 17 5

7)	Was it easy for the students to understand the directions of the test?			
8)	70 24 5 1 Was the	A) Yes, very easy. B) Yes, but it could have been made easier. C) No, it was difficult. D) It was all but impossible. ere adequate time for you to communicate the test directions to the students?		
	84 11 4 1	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>		
9)	Was it easy to monitor the students during the test?			
	75 19 6 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>		
10)	Were y	ou assisted by a proctor to monitor the students during the test?		
	63 37	A) Yes B) No		
11)	Was it	easy to administer the break between sessions of the test?		
	58 31 10 1	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>		
12)	Was the	e length of time for the break between sessions adequate?		
	78 16 5 1	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>		
13)	Was it	easy to prepare, collect, and organize the materials after the test?		
	56 36 7 1	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>		
14)	Was there adequate time for you to collect, organize, and return the materials to the STC after the test?			
	60 26 10 4	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>		

15)	How ma	any students asked questions to clarify what they were to do?
	47 44 6 3	<ul><li>A) Almost none of them.</li><li>B) A very few of them.</li><li>C) Many, if not most of them.</li><li>D) Almost all of them.</li></ul>
16)	How lor	ng did it take most students to finish all the items in Session 1?
	3 17 61 19	A) 0-30 minutes B) 31-45 minutes C) 46-60 minutes D) More than 60 minutes
17)	How lor	ng did it take most students to finish all the items in session 2?
	7 30 40 23	A) 0-30 minutes B) 31-45 minutes C) 46-60 minutes D) More than 60 minutes
18) How long did it take most students to answer one extended constructed r		ng did it take most students to answer one extended constructed response item?
	49 30 13 8	A) 6-9 minutes B) 10-12 minutes C) 13-16 minutes D) More than 16 minutes
19)	Did the	items appear to measure higher-level thinking skills?
	2 26 58 14	A) No, not at all B) Somewhat C) To a great extent D) Yes, completely
20)	Did the difficult	items appear to cover a range of difficulty, from relatively easy to relatively?
	4 39 44 13	A) No, not at all B) Somewhat C) To a great extent D) Yes, completely

### Maryland High School Assessment January 2000 Field Test English (N = 226)

	•	•
1)	Overall	, did you find the test easy to administer?
	72 25 3 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
2)	Overall	, was there adequate time to administer the test?
	69 9 14 8	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
3)	Was it	easy to prepare to administer the test?
	64 32 3 1	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
4)	Was the	ere adequate time for you to prepare to administer the test?
	64 21 9 6	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
5)	Was it	easy to distribute the test materials to the students?
	77 21 2 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
6)	Was the	ere adequate time for you to distribute test materials to the students?
	75 14 8 3	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>

7)	Was it e	easy for the students to understand the directions of the test?	
8)	73 18 8 1 Was the	A) Yes, very easy. B) Yes, but it could have been made easier. C) No, it was difficult. D) It was all but impossible. ere adequate time for you to communicate the test directions to the students?	
	73 15 9 3	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>	
9)	Was it e	easy to monitor the students during the test?	
	83 11 5 1	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>	
10)	Were ye	ou assisted by a proctor to monitor the students during the test?	
	57 43	A) Yes B) No	
11)	Was it e	easy to administer the break between sessions of the test?	
	68 21 11 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>	
12)	Was the	e length of time for the break between sessions adequate?	
	63 20 11 6	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>	
13)	Was it e	easy to prepare, collect, and organize the materials after the test?	
	55 35 9 1	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>	
14)	Was there adequate time for you to collect, organize, and return the materials to the STC after the test?		
	60 19 10 11	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>	

- How many students asked questions to clarify what they were to do? 15)
  - 43
  - 47
  - A) Almost none of them.B) A very few of them.C) Many, if not most of them.D) Almost all of them. 6

# Maryland High School Assessment January 2000 Field Test Geometry (N = 208)

1)	Overall	, did you find the test easy to administer?
	53 35 11	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
2)	Overall	, was there adequate time to administer the test?
	47 21 19 13	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
3)	Was it e	easy to prepare to administer the test?
	53 30 16 1	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
4)	Was the	ere adequate time for you to prepare to administer the test?
	62 17 14 7	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
5)	Was it	easy to distribute the test materials to the students?
	57 34 9 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
6)	Was the	ere adequate time for you to distribute test materials to the students?
	51 31 11 7	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>

7)	Was it	easy for the students to understand the directions of the test?		
8)	49 33 16 2 Was the	A) Yes, very easy. B) Yes, but it could have been made easier. C) No, it was difficult. D) It was all but impossible. ere adequate time for you to communicate the test directions to the students?		
	59 26 10 5	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>		
9)	Was it easy to monitor the students during the test?			
	74 18 6 2	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>		
10)	Were y	ou assisted by a proctor to monitor the students during the test?		
	60 40	A) Yes B) No		
11)	Was it	easy to administer the break between sessions of the test?		
	61 25 11 3	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>		
12)	Was th	e length of time for the break between sessions adequate?		
	73 13 9 5	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>		
13)	Was it easy to prepare, collect, and organize the materials after the test?			
	40 38 18 4	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>		
14)	Was there adequate time for you to collect, organize, and return the materials to the STC after the test?			
	47 20 17 16	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>		

- How many students asked questions to clarify what they were to do? 15)

  - A) Almost none of them.B) A very few of them.C) Many, if not most of them.D) Almost all of them.

### Maryland High School Assessment January 2000 Field Test Government (N = 111)

	•	
1)	Overall,	, did you find the test easy to administer?
	66 29 5 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
2)	Overall,	, was there adequate time to administer the test?
	78 10 6 6	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
3)	Was it e	easy to prepare to administer the test?
	58 33 9 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
4)	Was the	ere adequate time for you to prepare to administer the test?
	62 25 11 2	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>
5)	Was it	easy to distribute the test materials to the students?
	72 24 3 1	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>
6)	Was the	ere adequate time for you to distribute test materials to the students?
	77 17 1 5	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>

()	was it easy for the students to understand the directions of the test?			
	66 29 5 0	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>		
8)	Was the	ere adequate time for you to communicate the test directions to the students?		
	77 17 4 2	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>		
9)	Was it easy to monitor the students during the test?			
	79 14 5 2	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>		
10) Were you assisted by a proctor to monitor the students during the tes		ou assisted by a proctor to monitor the students during the test?		
	73 27	A) Yes B) No		
11)	Was it easy to administer the break between sessions of the test?			
	57 25 15 3	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>		
12)	Was the length of time for the break between sessions adequate?			
	75 13 5 7	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>		
13)	Was it easy to prepare, collect, and organize the materials after the test?			
	64 30 4 2	<ul><li>A) Yes, very easy.</li><li>B) Yes, but it could have been made easier.</li><li>C) No, it was difficult.</li><li>D) It was all but impossible.</li></ul>		
14)	Was there adequate time for you to collect, organize, and return the materials to the STC after the test?			
	55 23 11 11	<ul><li>A) Yes, the time was ample.</li><li>B) Yes, but it was almost too short.</li><li>C) No, but the time was almost enough.</li><li>D) Not at all; I needed more time.</li></ul>		

- How many students asked questions to clarify what they were to do? 15)
  - 55
  - 36
  - A) Almost none of them.B) A very few of them.C) Many, if not most of them.D) Almost all of them. 7

# Appendix IV Local Accountability Coordinator Questionnaire

# Maryland High School Assessment January 2000 Field Test (N = 11)

(Numbers preceding options are numbers of LAC's who chose that option)

1)	Materials	were received in good condition.		
	1 E 0 C 1	Strongly agree     Agree     No opinion     Sometimes disagree     Strongly disagree		
2)	The corre	ect numbers of materials indicated on the packing list were received.		
	5 E O O O	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree		
3)	Boxes were labeled correctly with the school names and were color coded			
	0 E 1 C 3 E	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree		
4)	The Maryland High School Assessment Test Administration and Coordination Manua provided the necessary information for coordinators to fulfill their responsibilities.			
	3 E 1 C 2 C	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree		
5)	Directions for the inventory of materials procedure were clear.			
	3 E 0 C 2 E	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree		

6)	The Maryland High School Assessment Test Administration and Coordination Manual was laid out in a logical manner.		
	<ul> <li>3 A) Strongly agree</li> <li>5 B) Agree</li> <li>1 C) No opinion</li> <li>1 D) Sometimes disagree</li> <li>1 E) Strongly disagree</li> </ul>		
7)	The instructions for distribution of materials in the Maryland High School Assessment Test Administration and Coordination Manual were helpful.		
	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree Strongly disagree		
8)	The instructions for preparation for return shipment in the Maryland High School Assessment Test Administration and Coordination Manual were helpful.		
	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree		

## Appendix V School Test Coordinator Questionnaire

## Maryland High School Assessment January 2000 Field Test (N = 55)

1)	Material	s were received in good condition.		
	26 6	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree		
2)	The correct numbers of materials indicated on the packing list were received.			
	9 2	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree		
3) Boxes were labeled correctly with the school names and were color		were labeled correctly with the school names and were color coded for content.		
	24	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree		
4)	The Maryland High School Assessment Test Administration and Coordination provided the necessary information for coordinators to fulfill their responsibility.			
	34 13	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree		
5)	Directions for the inventory of materials procedure were clear.			
	42 42 7 7 2	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree		

	39 45 7 9	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree	
7)	The instructions for distribution of materials in the Maryland High School Assessment Test Administration and Coordination Manual were helpful.		
	33 50 8 9	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree	
8)	The instructions for preparation for return shipment in the Maryland High School Assessment Test Administration and Coordination Manual were helpful.		
	30 35 7 15 13	A) Strongly agree B) Agree C) No opinion D) Sometimes disagree E) Strongly disagree	

The Maryland High School Assessment Test Administration and Coordination Manual was laid out in a logical manner.

6)